

**IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE**

Applicants: Daniel A. Hilbrich )  
Serial No.: 10/047,852 )  
Filed: January 15, 2002 )  
Title: FILTERING DEVICE FOR AN )  
ESPRESSO-TYPE COFFEE )  
MAKER )  
Group Art Unit: 3742 )  
Confirmation: 5104 )  
Examiner: Reginald Alexander )  
Attorney Docket No.: 29929/38327 )

**APPEAL BRIEF**

MS Appeal Brief – Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

In response to the notice of appeal filed May 13, 2008, attached is an appeal brief in compliance with 37 C.F.R. § 41.37. The \$255 fee set forth in 37 C.F.R. § 41.20(b)(2) is being paid by credit card.

Any fee deficiencies may be charged, or any overpayment credited, to our deposit account 13-2855.

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**I. Real Party in Interest**

The real party in interest in this appeal is the applicant Daniel A. Hilbrich.

**II. Related Appeals and Interferences**

There are no other appeals or interferences known to the appellant or the appellant's legal representative, which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

### **III. Status of Claims**

Substantive prosecution of this reissue application includes four non-final official actions dated September 25, 2002, October 28, 2004, March 30, 2006, and August 23, 2007, a final official action dated February 13, 2008, and an advisory action dated April 30, 2008. Responses thereto have been filed as "Amendment" dated January 24, 2003, "Response to Official Action" of October 28, 2004 (January 31, 2005), "Response to Official Action" of March 30, 2006 (July 14, 2006), "Response to Official Action" of August 23, 2007 (November 20, 2007), and "Response to Final Rejection" (April 14, 2008).

A Pre-Appeal Brief Appeal Conference Decision was issued on July 2, 2008, holding that the appeal should go forward to the Board of Patent Appeals and Interferences.

Claims 1-8, 10-12, 14-21, and 23-28 are pending in the application. Claims 9, 13, and 22 have been canceled.

Claims 1-8, 10-12, 14-21, and 23-28 stand rejected based on the most recent official action dated February 13, 2008, and a subsequent advisory action dated April 30, 2008.

The rejections of claims 1-8, 10-12, 14-21, and 23-28 are being appealed.

**IV. Status of Amendments**

No amendments were presented in response to the final action dated February 13, 2008. Accordingly, the Appellant understands the current form of the claims to be represented by the Response to Official Action of August 23, 2007, and as reproduced in Section VIII below (Claims Appendix).

## V. Summary of Claimed Subject Matter

The claimed subject matter relates to a filtering device for an espresso-type coffee maker and a method of making lower lipids-containing brewed coffee in an espresso-type coffee maker. See Application specification, col. 2, lines 39-53. Standard filtration techniques and filtering devices for espresso-type coffee makers allow the compounds cafestol and kahweol present in coffee oils (i.e. lipids) to pass through to the brewed coffee. These compounds have been shown to substantially elevate serum, cholesterol, and triglycerides levels, and to adversely affect liver function. Specification, col. 1, lines 29-34. Espresso-type coffee makers typically deliver hot water through very finely ground coffee under a pressure of 3 bar to 15 bar. Specification, col. 1, lines 10-14. The filtering device of the claimed invention is for use in an espresso-type coffee maker having a spout to deliver heated water under pressure, and a receptacle to receive the brewed filtered coffee. Specification, col. 2, lines 43-47. The filtering device of the claimed invention includes a paper filter and a permanent (e.g. metallic) filter. Specification, col. 3, lines 49-52. The permanent filter has openings sized to filter coffee grounds having a size of 0.3 mm or less. See specification, col. 1, lines 14-19. The paper filter is provided in the flow path of the liquid brewed coffee to at least partially remove the harmful lipids from the brewed coffee. Specification, col. 2, lines 47-53. The paper filter includes at least one layer, but can be made of a plurality of layers. The layers can be crimped together about their perimeters to make the paper filters easier to handle. Specification, col. 3, lines 55-62. The paper filter can be placed on top of the permanent filter, between the permanent filter and the coffee grounds. Specification, col. 3, lines 50-52.

Independent claims 1, 4, and 21 are supported by this disclosure.

Claim 1 recites:

A filtering device for an espresso-type coffee maker of the type having a spout to deliver heated water under high pressure to finely ground coffee beans to brew coffee therefrom, and a receptacle to receive brewed filtered coffee, means defining a flow path between said finely ground beans to said receptacle, comprising:

a permanent filter in said path of heated coffee passing to the receptacle which filter has an opening sized to filter out the fine espresso coffee grounds having a size of 0.3 mm or less; and

at least one layer of filter paper in the path of the heated coffee passing to the receptacle, the at least one layer of filter paper having a filter thickness sufficient to effectively remove and trap lipids from the heated coffee.

Claim 4 recites:

In an espresso-type coffee maker of the type that delivers heated water under elevated pressure to a pan in which finely ground coffee beans are present and from which brewed coffee is removed through a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or

less, the improvement of a disposable paper filter across the flow path of the brewed coffee, said paper filter being of a thickness and size so as to effectively remove and trap lipids and fine grounds from the brewed coffee and to reduce the lipids in the brewed coffee and wherein said paper filter is sized and shaped to fit over and adjacent the top of said permanent filter between said permanent filter and said finely ground coffee and said finely ground coffee is positioned above and on said paper filter so that the paper filter also serves to aid in removing, in a single operation, the used grounds as well as the paper filter from the coffee maker.

Claim 21 recites:

A filter for use in an espresso-type coffee maker of the type having a spout to deliver heated water under elevated pressure to a pan in which finely ground coffee beans are present and from which brewed coffee is removed through a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less, the filter comprising:

a layer of paper filter material of a size and shape to fit over and adjacent a top of the permanent filter between the permanent filter and the finely ground coffee beans, the paper filter material having a thickness to effectively remove and trap lipids and fine grounds from the brewed coffee and to reduce the trapped lipids in the brewed coffee.

The coffee grounds are filtered by the permanent filter, and brewed coffee is also filtered by the paper filter to remove harmful lipids and coffee grounds which raise the cholesterol levels in a person drinking the brewed coffee. The paper filter is removeably placed on top of the permanent filter between the coffee grounds and the permanent filter. Specification, col. 3, lines 50-52. The combined use of the permanent filter and the paper filter can reduce the lipid content of a brewed coffee by 80% or more.

Independent claims 7 and 17 are further supported by this disclosure.

Claim 7 recites:

A method of making lower lipids containing brewed coffee liquid in an espresso-type coffee maker of the type that makes coffee liquid by passing heated water under elevated pressure through finely ground coffee beans held above a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less, the method comprising the steps of placing disposable paper coffee filter material, of the type that may absorb lipids, and of a size and shape to cover the permanent filter in the maker atop and covering the permanent filter, placing the finely ground coffee beans atop said paper coffee filter material and passing heated water at an elevated pressure through, sequentially, the coffee beans, said paper filter materials, and said permanent filter to create brewed coffee liquid and to allow lipids therefrom to be absorbed by said paper filter material so as to make lower lipid containing coffee liquid.

Claim 17 recites:

A method of making lower lipids containing brewed coffee liquid in an espresso-type coffee maker of the type having a spout to deliver heated water under elevated pressure to finely ground coffee beans to brew coffee therefrom, a receptacle to receive brewed coffee, and a flow path defined



between said finely ground beans to the receptacle including a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less in the flow path, comprising:

placing at least one layer of filter paper in the flow path; and  
passing heated water at an elevated pressure sequentially through the finely ground coffee beans, the at least one layer of filter paper, and the permanent filter to the receptacle;

wherein the at least one layer of filter paper has a filter thickness sufficient to effectively remove the trap lipids from the coffee beans.

Claims 2, 3, and 8 depend from independent claim 1; claims 5, 6, and 10-12 depend from independent claim 4, claims 14-16 depend from independent claim 7; claims 18-20 depend from independent claim 17; and claims 23-28 depend from independent claim 21. The dependent claims incrementally recite more specific features of the independent claim limitations. The dependent claims are supported by the above summarized disclosures.

**VI. Grounds of Rejection to be Reviewed on Appeal**

As a result of the advisory action mailed April 30, 2008, (a) claims 1, 4, 5, 7, 8, 10-12, 14-18, 21, 23-25, 27, and 28 stand rejected under 35 USC § 103(a) as obvious over Smith et al. U.S. Patent No. 5,403,605 ("Smith") in view of Giuliano, U.S. Patent No. 5,490,447 ("Guiliano"); and (b) claims 2, 3, 6, 19, 20, and 26 stand rejected under 35 U.S.C. § 103(a) as obvious over Smith in view of Guiliano and further in view of Krebs, U.S. Patent No. 4,052,318 ("Krebs").

The issues on appeal are (a) whether the combination of Smith and Giuliano renders claims 1, 4, 5, 7, 8, 10-12, 14-18, 21, 23-25, 27, and 28 obvious, and (b) whether the combination of Smith, Guiliano, and Krebs renders claims 2, 3, 6, 19, 20, and 26 obvious.

## VII. Argument

### A. Rejection of Claims 1, 4, 5, 7, 8, 10-12, 14-18, 21, 23-25, 27, and 28 as Obvious

Claims 1, 4, 5, 7, 8, 10-12, 14-18, 21, 23-25, 27, and 28 stand rejected as obvious over Smith in view of Guiliano. The appellants submit that these claims are not obvious in view of Smith and Guiliano at least because Smith teaches away from the claimed invention.

Independent claims 1, 4, and 21 are directed to a device for filtering espresso-type coffee ground having a size of 0.3 mm or less. Independent claims 7 and 17 are directed to a method of making lower lipids-containing brewed espresso-type coffee. Each of the independent claims recites the combined use of a permanent **filter** and a paper filter. See Claims 1, 4, 7, 17, and 21. This combination effectively removes harmful lipids and coffee grounds that may increase the cholesterol levels in a person drinking the brewed coffee. See specification, col. 3, lines 62-66 ("Thus, the coffee grounds CG are filtered by the metallic filter 18 [i.e. permanent filter], and the brewed coffee is also filtered by the paper filter 30 to remove harmful lipids and coffee grounds which may effect a rise in the cholesterol levels in a user of the brewed coffee."). Additionally, claim 1 recites, in relevant part, that the "permanent filter has] openings sized to filter out the fine espresso coffee grounds having a size of 0.3 mm or less . . . ." Claims 4, 7, 17, and 21 similarly recite "a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less . . . ."

Neither reference discloses or suggests the **combined use of a paper filter and a permanent filter** to remove harmful lipids from brewed espresso-type coffee. Moreover, it is improper to combine the primary reference, Smith, with any reference disclosing or suggesting the use of a permanent filter having openings sized to filter coffee grounds having a size of less than 0.3 mm because Smith teaches away from such modification. Thus, a *prima facie* case of obviousness cannot be based in any part on Smith. Accordingly, the applied references and any proper combination thereof cannot support a *prima facie* case of obviousness.

Specifically, Smith fails to disclose or suggest the combined use of a permanent filter and a paper filter for any reason, much less in order to reduce the lipid content of the brewed coffee. The foraminous support 44 of Smith cannot be properly characterized as a permanent filter, as there is no indication in Smith that the foraminous support 44 functions to filter any of the coffee grounds. Rather, Smith makes clear that the foraminous support 44 has openings that would allow the coffee grounds to pass through the foraminous support 44 if the paper filter was eliminated. The coffee being filter in Smith has "a grind with an average particle size within a range of from 300 to 850 microns," while the foraminous support sheet 44 has openings with a diameter of 1 mm to 2.5 mm. (The size of these openings is a minimum of 3.3 times the maximum size of the coffee grounds recited in the appealed claims.) Smith, col. 3,

lines 30-33, and Herrick et al., U.S. Patent No. 5,190,653 ("Herrick"), col. 3, lines 29-30 (Smith expressly incorporates the disclosure of Herrick by reference. See Smith, col. 2, lines 66-68, to col. 3, lines 1-2). Thus, the foraminous support sheet 44 of Smith is unable to filter the coffee grounds, especially coffee grounds having a size of 0.3 mm as called for by the claims. The paper filter of Smith is completely responsible for filtration of the grounds. By comparison, in the claimed invention "the coffee grounds CG are filtered **by the metallic filter** 18 [i.e. the permanent filter] . . . ." Specification, col. 3, lines 62-63. Accordingly, the foraminous support sheet does not function as a filtering element within the meaning of the claims, which calls for a filtering element "sized to filter coffee grounds having a size of 0.3 mm or less" or equivalent language.

Regardless of whether the foraminous support sheet 44 can be characterized as a filtering element, Smith fails to disclose or suggest a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less. Rather, Smith explicitly discloses that the foraminous support sheet 44 has openings with a diameter of 1 mm to 2.5 mm. Herrick, col. 3, lines 29-30. Furthermore, Smith expressly teaches that the foraminous support sheet 44 should contain **the maximum open area consistent with strength** so as not to interfere with the rate at which the coffee can be brewed. Smith, col. 2, lines 14-18; and Herrick, col. 3, lines 22-23. Accordingly, one of ordinary skill in the art would not be motivated to modify Smith to provide for openings sized to filter coffee grounds having a size of 0.3 mm or less because such modification would require one to reduce the size of the openings of the foraminous support sheet 44, which is contrary to the express teaching in Smith that the foraminous support sheet 44 contain the maximum open area consistent with strength. Smith clearly teaches away from any reduction in the size of the foraminous support openings. See *Singh v. Brake*, 317 F.3d 1334, 1346 (Fed. Cir. 2003) ("whether or not a reference 'teaches away' from a claimed invention [is] relevant in determining whether or not a claimed invention would have been obvious."); and *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference . . . would be led in a direction divergent from the path that was taken by the applicant.").

"It is improper to combine references where the references teach away from their combination." MPEP § 2145(X)(D)(2) (citing *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983)). Therefore, it would be improper to combine Smith with Guiliano or any other reference teaching a filter having openings having a diameter of less than 1 mm to 2.5 mm, let alone a filter having opening sized to filter coffee ground having a size of 0.3 mm or less. Thus, a *prima facie* case of obvious cannot be based in whole or in part on Smith. *McGinely v. Franklin Sports, Inc.*, 262 F.3d 1339, 1354 (Fed. Cir. 2001) (noting that as a general rule "references that teach away cannot serve to create a *prima facie* case of obviousness.") (citing *In re Gurley*, 27 F.3d at 553); and *Tec Air Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1360 (Fed. Cir. 1999) ("There is no suggestion to combine, however, if a reference teaches

away from its combination with another source." ). Accordingly, independent claims 1, 4, 7, 17, and 21, and claims 5, 8, 10-12, 14-16, 18, 23-25, 27, and 28 depending therefrom, are allowable over the cited references.

**B. Rejection of Claims 2, 3, 6, 19, 20, and 26 as Obvious**

Claims 2, 3, 6, 19, 20, and 26 stand rejected as obvious over Smith in view of Guiliano and further in view of Krebs. Claims 2 and 3 depend from independent claim 1, claim 6 depends from independent claim 4, and claims 19, 20, and 26 depend from independent claim 21.

The rejection of claims 2, 3, 6, 19, 20, and 26 is premised on the assertion that the combination of the Smith and Guiliano discloses each and every limitation of the independent claims from which they depend. As shown above, the inventions of independent claims 1, 4, 7, and 21 are allowable over the combination of Smith and Guiliano. Therefore, dependent claims 2, 3, 6, 19, 20, and 26 are also allowable.

**C. Conclusion**

In view of the foregoing, the appellant submits that (a) claims 1, 4, 5, 7, 8, 10-12, 14-18, 21, 23-25, 27, and 28 are not obvious over Smith in view of Guiliano, and (b) claims 2, 3, 6, 19, 20, and 26 are not obvious over Smith in view of Guiliano and further in view of Krebs. Accordingly, the appellant respectfully request reversal of the above rejections.

Respectfully submitted,

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**VIII. Claims Appendix**

1. A filtering device for an espresso-type coffee maker of the type having a spout to deliver heated water under high pressure to finely ground coffee beans to brew coffee therefrom, and a receptacle to receive brewed filtered coffee, means defining a flow path between said finely ground beans to said receptacle, comprising:

a [metallic] permanent filter in said path of heated coffee passing to the receptacle which filter has an opening sized to filter out the fine espresso coffee grounds having a size of 0.3 mm or less; and

at least one layer of filter paper in the path of the heated coffee passing to the receptacle, the at least one layer of filter paper having a filter thickness sufficient to effectively remove and trap lipids from the heated coffee.

2. The device of claim 1 wherein the filter paper has a plurality of layers.

3. The device of claim 2 where the filter paper layers are crimped together to form an easily handled unit.

4. In an espresso-type coffee maker of the type that delivers heated water under [3 to 15 bars of] elevated pressure to a pan in which finely ground coffee beans are present and from which brewed coffee is removed through a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less, the improvement of a disposable paper filter across the flow path of the brewed coffee, said paper filter being of a thickness and size so as to effectively remove and trap lipids and fine grounds from the brewed coffee and to reduce the lipids in the brewed coffee [by at least 50%] and wherein said paper filter is sized and shaped to fit over and adjacent the top of said permanent filter between said permanent filter and said finely ground coffee and said [filing] finely ground coffee is positioned above and on said paper filter so that the paper filter also serves to aid in removing, in a single operation, the used grounds as well as the paper filter from the coffee maker.

5. The [invention] improvement of claim 4 wherein the paper filter is of such a thickness and size so as to effectively remove and trap lipids and fine particulate grounds from the brewed coffee so as to remove approximately 95% of the lipids that would be present absent the paper filter.

6. The [invention] improvement of claim 4 wherein said filter paper is made up of at least two layers of standard thickness coffee filter paper.

7. [The] A method of making lower lipids containing brewed coffee liquid in an espresso-type coffee maker of the type that makes coffee liquid by passing heated water under elevated pressure [of 3 to 15 bars] through finely ground coffee beans held above a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less, the method comprising the steps of placing disposable paper coffee filter material, of the type that may absorb lipids, and of a size and shape to cover the permanent filter in the maker atop and covering the permanent filter, placing the finely ground coffee beans atop said paper coffee filter material and passing heated water at [a pressure of 3 to 15 bars] an elevated pressure through, sequentially, the coffee beans, [and through] said paper filter materials, and said permanent filter to create brewed coffee liquid and to allow lipids therefrom to be absorbed by said paper filter material so as to make lower lipid containing coffee liquid.

8. The device of claim 1, wherein the permanent filter comprises a metallic filter.

9. Canceled

10. The improvement of claim 4, wherein the heated water is under a pressure of from 3 to 15 bar.

11. The improvement of claim 4, wherein the paper filter is of such a thickness and size so as to effectively remove and trap lipids and fine particulate grounds from the brewed coffee so as to remove at least 50% of the lipids that would be present absent the paper filter.

12. The improvement of claim 4, wherein the finely ground coffee has grounds of 0.3 mm or less in particle size.

13. Canceled

14. The method of claim 7, wherein the heated water is under a pressure of from 3 to 15 bar.

15. The method of claim 7, wherein the paper filter is of such a thickness and size so as to effectively remove and trap lipids and fine particulate grounds from the brewed coffee so as to remove at least 50% of the lipids the would be present absent the paper filter.

16. The method of claim 7, wherein the finely ground coffee has grounds of 0.3 mm or less in particle size.

17. A method of making lower lipids containing brewed coffee liquid in an espresso-type coffee maker of the type having a spout to deliver heated water under elevated pressure to finely ground coffee beans to brew coffee therefrom, a receptacle to receive brewed coffee, and a flow path defined between said finely ground beans to the receptacle including a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less in the flow path, comprising:

placing at least one layer of filter paper in the flow path; and

passing heated water at an elevated pressure sequentially through the finely ground coffee beans, the at least one layer of filter paper, and the permanent filter to the receptacle;

wherein the at least one layer of filter paper has a filter thickness sufficient to effectively remove and trap lipids from the coffee beans.

18. The method of claim 17, wherein the permanent filter comprises a metallic filter.

19. The method of claim 17, wherein the at least one layer of filter paper comprises a plurality of layers of filter paper.



20. The method of claim 19, wherein the plurality of layers of filter paper are crimped together to form an easily handled unit.

21. A filter for use in an espresso-type coffee maker of the type having a spout to deliver heated water under elevated pressure to a pan in which finely ground coffee beans are present and from which brewed coffee is removed through a permanent filter having openings sized to filter coffee grounds having a size of 0.3 mm or less, the filter comprising:  
a layer of paper filter material of a size and shape to fit over and adjacent a top of the permanent filter between the permanent filter and the finely ground coffee beans, the paper filter material having a thickness to effectively remove and trap lipids and fine grounds from the brewed coffee and to reduce the trapped lipids in the brewed coffee.

22. Canceled

23. The filter of claim 21, wherein the heated water is under a pressure of from 3 to 15 bar.

24. The filter of claim 21, wherein the paper filter material is of such a thickness and size so as to effectively remove and trap lipids and fine particulate grounds from the brewed coffee so as to remove at least 50% of the lipids that would be present absent the paper filter.

25. The filter of claim 21, wherein the paper filter material is of such a thickness and size so as to effectively remove and trap lipids and fine particulate grounds from the brewed coffee so as to remove approximately 95% of the lipids that would be present absent the paper filter.

26. The filter of claim 21 further comprising a second layer of paper material.

27. The filter of claim 21, wherein the shape of the paper filter material is approximately circular.

28.     The filter of claim 27, wherein the circular paper filter material has a diameter of approximately 5 centimeters.

**IX. Evidence Appendix**

None.

**X.      Related Proceedings Appendix**

None.